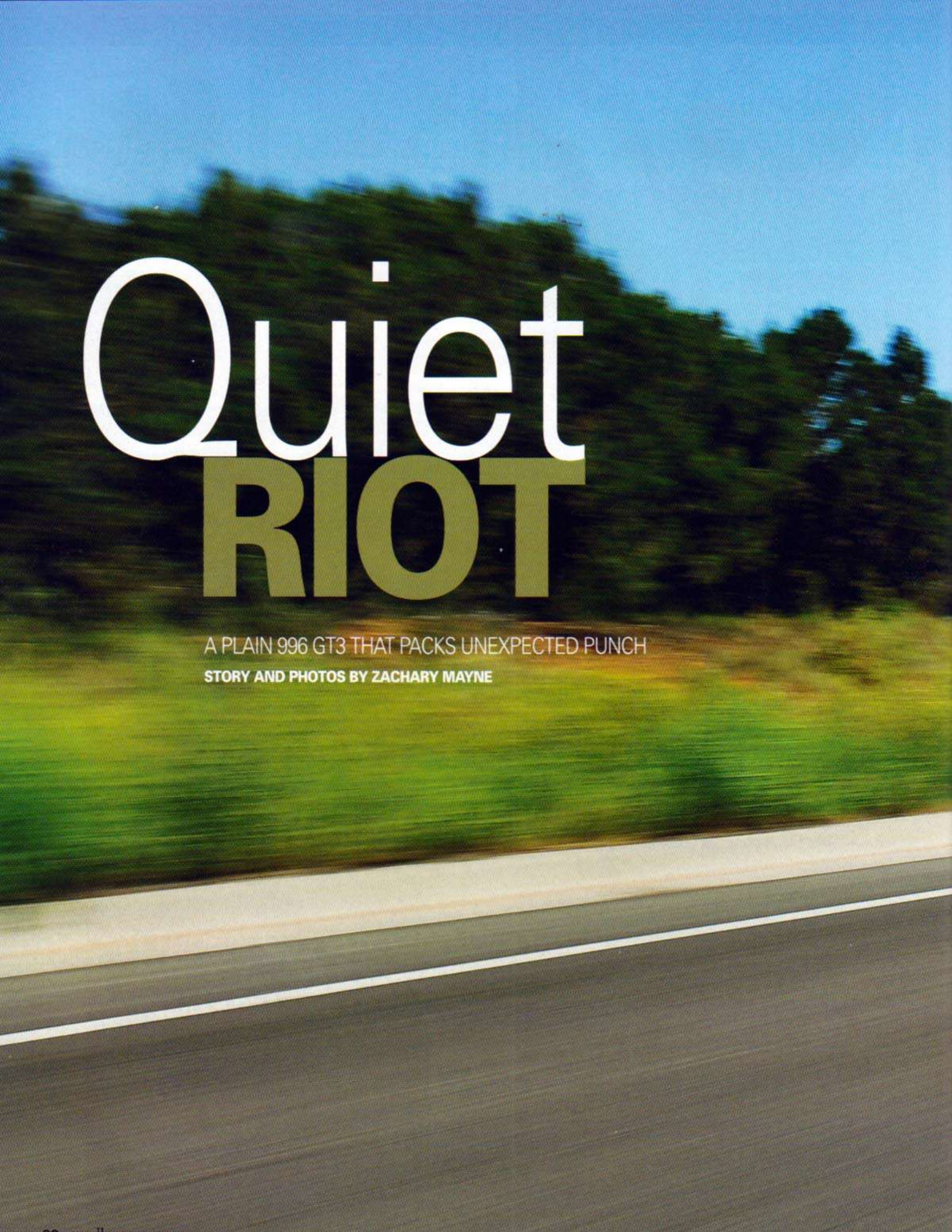
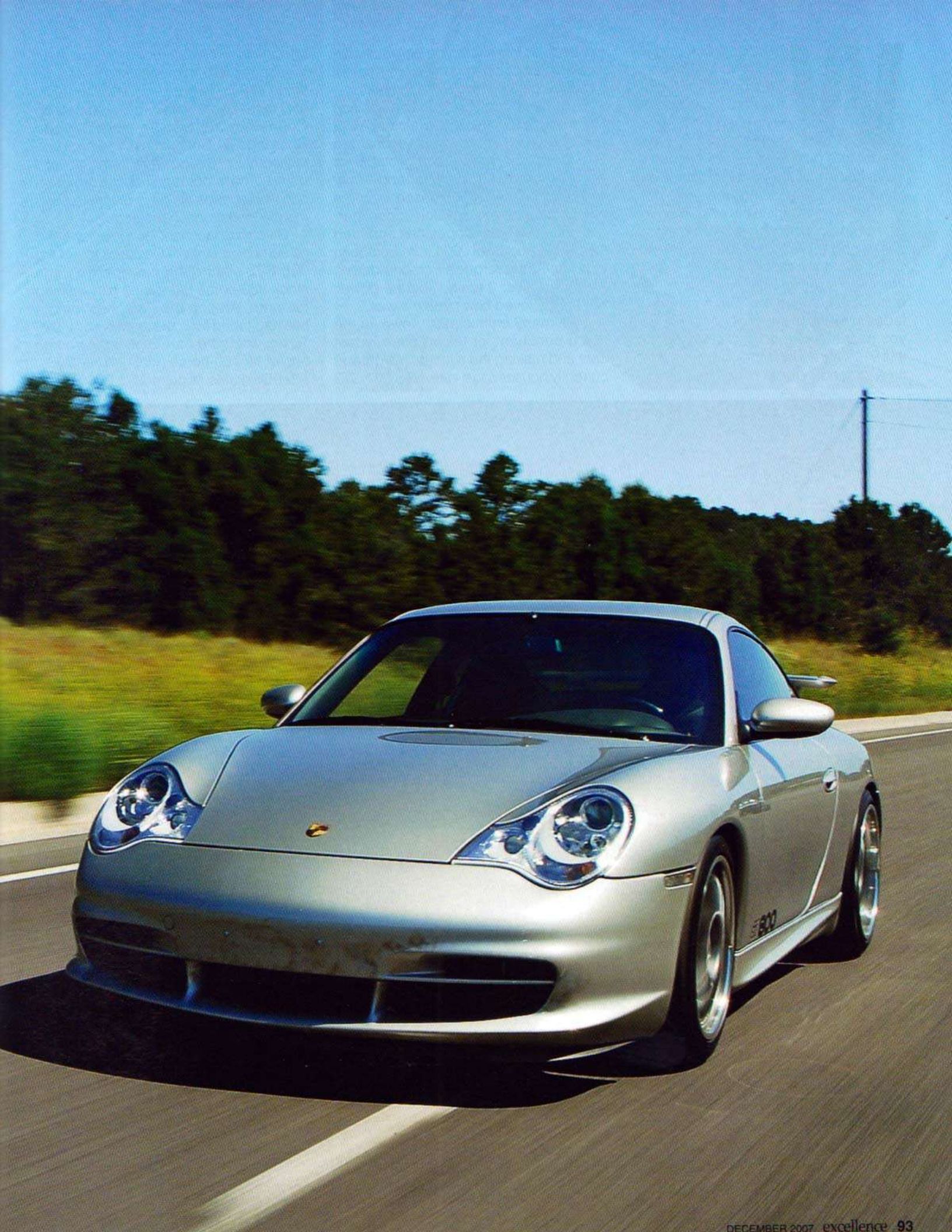


Quiet RIOT

A PLAIN 996 GT3 THAT PACKS UNEXPECTED PUNCH

STORY AND PHOTOS BY ZACHARY MAYNE



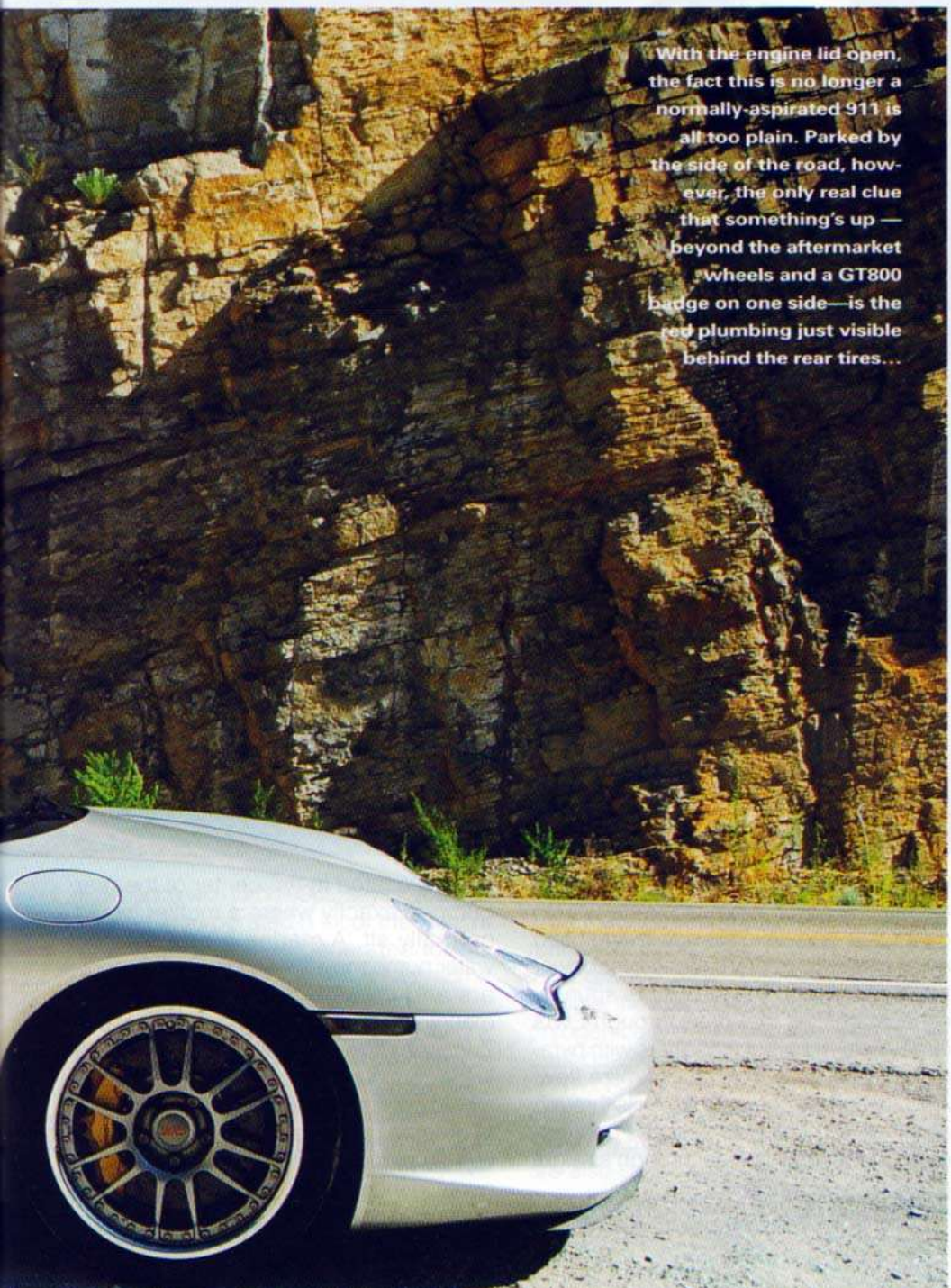
When the back door of Evolution Motorsports' transporter glides up, the unmistakable rear wing of a 996 GT3 glints in the sunlight. When the car rolls out, it looks stock enough — aside from its slightly lowered stance and three-piece O.Z. Racing wheels.

The flat six's bark in the crisp morning air, however, is enough to tell you there's something more to this plain silver 996 GT3 than most. Its exhaust note is loud, thanks to a rather brief exhaust. It's not quite race-car loud, but that comparison fades in terms of importance as soon as you hear the second notable aspect of this 911's aural signature. When the throttle is blipped, noises not normally associated with a GT3 follow: the unmistakable whistles that can only come from a pair of turbochargers spooling with the revs.

Built by Phoenix, Arizona's Evolution Motorsports for Jason Daskalos of Albuquerque, New Mexico, this turbocharged GT3 takes a Porsche already notable for being a handful at the limit and firmly nudges it off the cliff of reason — into a chasm of excess. Daskalos, a commercial real estate developer, first acquired the GT3 in August of 2004 from European Imports, Albuquerque's Porsche dealer. Says Daskalos: "I really liked the power, but I really loved how nimble it was."

Like many enthusiasts, however, he has a penchant for taking already fast cars and making them faster. His garage currently houses a just-delivered 997 GT3 and a convertible Viper he says is good for some 1,500 horsepower. He's had a string of 911 Turbos, from 993s to 997s, and races two Dodge Viper Competition Coupes in the SCCA's Speed World Challenge GT Championship, where he's currently in 18th position in the driver's points. That's not too shabby for someone who spends his days planning commercial construction projects.

Given his penchant for horsepower, it's no surprise that while Daskalos found the 996 GT3's handling near perfect, the stock 380-horse flat six left him wishing for more. Among the Porsches that he has had tuned for more power was a 996 Turbo, which he had Evolution turn into one of its 700-horse (claimed) GT700s. After Daskalos acquired his 996 GT3, a



With the engine lid open, the fact this is no longer a normally-aspirated 911 is all too plain. Parked by the side of the road, however, the only real clue that something's up — beyond the aftermarket wheels and a GT800 badge on one side—is the red plumbing just visible behind the rear tires...

phone conversation with Evolution owner Todd Zuccone prompted a discussion of twin-turbocharging the GT3, an unusual undertaking, even in the world of power-hungry Porsche tuners — especially since the Porsche factory had already built that car in the form of the 996 GT2.

"The goal was to create the ultimate sleeper," explains Zuccone when asked why Daskalos didn't just sell his GT3 and buy a GT2. "All the power of a big horsepower 996 twin-turbo with the look of a stock GT3. We had already built Jason a high-horsepower 996 twin turbo some years ago, and he wanted something that was completely different."

The heart of the conversion is a pair of hybrid KKK turbochargers hiding under the GT3's engine lid. The turbos were developed by Evolution and use standard KKK K24 turbo housings, inside of which are Garrett GT ball-bearing cartridges, compressor wheels, compressor housings, and turbine wheels. Says Zuccone: "We have a long history using these turbos and they offer excellent bottom-end power while providing enough airflow to support 850-plus horsepower."

Of course, Evolution didn't simply bolt these turbochargers onto the GT3's motor as it came from Porsche. Anyone familiar with turbocharged cars, Porsches or otherwise, knows that forced induction and a high static compression ratio aren't so compatible. And the stock GT3's responsive, high-revving nature comes in part thanks to its relatively high compression ratio of 11.7:1. In order to allow the motor to survive the punishment of real boost, it was completely disassembled so that the stock pistons could be exchanged for a custom set sourced from CP Pistons in Irvine, California. The result was a more suitable 9:1 static compression ratio.

Along with the new pistons, the crankcase was then reassembled with a custom set of Carrillo connecting rods. The cylinder heads received a mild porting on the intake side and were then O-ringed to allow the use of proprietary head gaskets stronger than the OEM gaskets, providing a better seal between the heads and cylinder housings. Everything was bolted together with ARP head studs.

In order to provide increased intake-air flow to the turbochargers, Evolution installed its V-Flow induction system, which includes turbo air-inlet ducts to feed fresh air to both turbos in a design similar to the factory 996 Turbo intake. The stock Bosch mass air-flow sensor was replaced with a custom-calibrated Hitachi mass air-flow sensor, which Zuccone claims is a much more accurate way to meter flow and which is now being used on all of the company's high-horsepower turbo packages. The turbos are spun by exhaust gasses that pass through Evo's large-diameter tubular headers with pyramid-merge collectors to optimize flow. After the turbos, the exhaust exits through a pair of 100-cell HJS catalytic converters and then terminates through straight pipes with no mufflers.

With any engine turbocharged to this level, intercooling to the bring charge-air temperatures down is a requirement, not an option. The solution to providing sufficient cooling without advertising the fact that this 911 is turbocharged was provided by the installation of liquid-to-air intercoolers in place of the air-to-air setup that 996 Turbos and GT2s use. Says Zuccone: "On this car, part of the 'cool factor' was not to have the air ducts feeding the intercoolers. We fabricated the twin intercoolers to fit in the rear quarter panels, behind the rear wheels. Without air ducts to feed the intercoolers, this was the only option."

The next step was to fabricate a 2.5-gallon water tank to hold the water transferred through those intercoolers. The tank is located in the center of the rear bumper, exactly where a muffler would normally sit. A marine-grade electric water pump moves water to the intercoolers and through the heat exchanger mounted in the front of the car. Explains Zuccone: "We utilized the OEM opening in the front bumper to house an OEM radiator to cool the water for the intercoolers." In order to ensure as much heat dissipation as possible, the aluminum components in the cooling system were Swain-coated with a thermal barrier.

To get enough fuel to the motor, Evolution relied on its experience developing high-powered 996 Turbo upgrades and installed its GT800 fuel system, which includes a custom, high-flow fuel pump. Says Zuccone: "Additionally, we replace the injectors with higher-flow, high-impedance motorsport injectors to deliver adequate fuel to support the power." A new fuel rail, fuel-pressure regulator, tank pickup, and braided-steel, fire-jacketed fuel lines complete the fuel-system upgrades.

GT2 in this GT3 with no modifications," comments Zuccone. The clutch uses a Sachs pressure plate modified to provide roughly 500 more pounds of clamping force. In order to prevent slip, a custom-designed ceramic disc is used. A lightweight billet flywheel rounds out the clutch package. Though the GT3's gearbox itself proved to be strong enough for the increased power, the stock differential proved to be less than adequate.

"We grenaded the OEM GT3 differential the first time we took the car to the drag strip," remarks Zuccone. The solution was the installation of a billet GT differential from Guard Transmission in Meadow Vista, California. "The GT differential is bulletproof and is a much better

are lightweight O.Z. Superleggera three-piece alloys that measure 18x8.5 inches up front and 18x11 inches in the rear. These wear Michelin Pilot Sport Cups measuring 235/40ZR18 and 295/30ZR18.

In person, it's apparent that this 996 really is a sleeper. With the exception of the slightly lowered ride height and aftermarket alloys, it looks bone stock. The interior also remains close to stock. Once we're sitting in the standard GT3 seats, the only obvious additions are new pedals plus gauges in the center console that display boost, air/fuel ratio, and exhaust temperature. Bolted in behind us is a Porsche Tequipment roll bar.

A twist of the ignition and then a brief whir from the starter brings the twin-turbo

Interior mods are limited to new pedals plus extra gauges and controls in the center console. The all-business tailpipes are a subtle clue that all is not stock, but nothing about this rear end says "twin-turbocharged."

experience with turbo 996s, says Zuccone: incorporated a lot of the Hitachi MAF calibrations he generated for his own Evo-built GT700, which utilizes some of the core GT800 components."

With the GT3's engine now packing a far more serious punch than Weissach's engineers had ever envisioned, the next move was to upgrade the driveline of the car, namely the clutch, differential, and rear axles. "Since the GT3 and GT2 have essentially the same gearbox, we were able to use our same clutch kit from the

unit than the OEM differential." Another area that needed improvement was the rear axles. In this case, Evolution installed its upgraded 300M axle kit. As the name implies, the kit includes heat-treated and cryogenically-treated axles made of aircraft-quality 300M steel-alloy.

The GT3's suspension remains completely stock with the exception of a slight lowering from stock specs. The brakes are also stock, since it's hard to improve upon the Porsche Ceramic Composite Brakes this GT3 came with. The wheels

flat six back to life with an aggressive bark. With the boost turned up to the maximum 23 psi, this GT3 boasts a claimed 812 horsepower at 7600 rpm and 800 lb-ft of torque at 4250 rpm. The shifter snicks into gear with a short, precise motion thanks to a short-shift kit that reduces the throws by 35 percent. It takes a strong flex of the left calf, but the firm clutch devised for this turbocharged GT3 is easy enough to modulate for a 700+hp supercar. Translation: we have to be relatively deft with the clutch release while

goosing the throttle just enough to avoid bogging down — or unexpectedly launching to hyper-speed. Instantly.

As we pull out onto the road for our driving impressions, we initially keep the boost at 18 psi, which means the engine should be making a still-impressive 722 horsepower at 7300 rpm and an equally noteworthy 702 lb-ft of twist at 4700 rpm. That is more than enough to shove us back hard in our seats as we unravel the GT3's leash in a straight line. It's also enough to break the rear tires loose if the steering wheel happens to be anything but centered, a fact illustrated vividly when explosive forward momentum is met with a sudden sidestep of the rear tires' fat, R-compound contact patches.

Compared to a stock 996 GT3, throttle response is lessened to a certain extent, an unavoidable consequence of a lowered compression ratio and turbocharging. But, in a car with acceleration as ballistic as this, shades of throttle response are something of a moot point. Another change made to the motor's electronics was lowering the rev-limiter from the stock GT3's 8300 rpm to a more conservative 7600 rpm. We'd say that's a good thing, judging by how quickly, easily, and often we bumped into the rev-limiter on our drive.

Switching the boost setting to 23 psi supposedly unleashes 812 horsepower, which arrives at 7600 rpm. We can't verify that number, but we can say that high boost transforms this GT3 into an all-out rocketship. By 3000 rpm, it's squatting on its rear suspension as it launches down the road, its exhaust letting out a nasty, low-down flat-six howl as the turbos spool with a high-pitched whine. Remember those scenes from *Star Wars* when the Milennium Falcon hits warp speed and the stars turned to straight lines? Picture that, but replace the stars with green trees and you'll be close to what we're seeing on our test route. The acceleration is not merely impressive but downright violent, turning what was a two-lane, seemingly wide country road into a suddenly narrow proposition. With enough road, triple digits and beyond are surpassed with the sort of disarming ease that will have a driver's license revoked in no time flat.

Fortunately, when it's time to slow this GT3 down from high speeds, the PCCBs are more than up to the task. Thanks to the stock suspension, handling is pretty much along the same lines as that of a normal GT3 — with light, nearly nervous turn-in and loads of information being filtered into our hands through the wheel and our backsides via the seat. The big difference is that, on corner exit, you really need to have the car pointed in a straight line before any real amount of throttle can be applied — and even then you need to be on your game and ready with whatever corrective steering lock is required to keep moving in a straight line.

One of the downsides to the huge amount of power being transmitted to the rear wheels is that it eliminates the delicate ability to steer with the throttle we cherish in the stock 996 GT3. Erring on the conservative side, that reduces our drive to a decidedly "point-and-shoot" experience. We wouldn't exactly describe this 996 GT3 as "chuckable" — it's a car with performance that straddles the line between exhilarating and intimidating. As it turns out, Zuccone agrees.

"This is not a car for everyone," says Zuccone from the passenger seat as we run back down the canyon road chosen for our driving impressions. It's pretty clear Zuccone won't build this car for everyone, either. "We knew Jason, so we felt okay building it for him." So he knows this is a car that can get an inexperienced driver in a lot of trouble in a big hurry. But we have a sneaking suspicion that's *exactly* what Daskalos was after.